NOAA NWS Emergency Warning

Accessible Emergency Notification and Communication: State of the Science Conference

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Emergency Warning

- **Effective emergency warning is the delivery of credible, understandable, specific information from a verified source to a person at risk with enough time to allow taking protective action.**

- **Emergency warning is a public safety issue, thus a local, state and Federal government responsibility.**

- **Commercial delivery of emergency warnings requires a return on investment that makes low cost, public, accessible availability unlikely.**

Accessible Emergency Warning

- **Effective accessible emergency warning for people with disabilities requires an effective emergency warning system for people without disabilities.**

- **Accessible emergency warnings on Government systems are required by the Telecommunications and Rehabilitation Acts and Executive Order 13347.**

National Weather Service

Mission Statement

- **The National Weather Service (NWS) provides weather, hydrologic, and climatic forecasts and *warnings* for the United States, its territories, and adjacent waters and ocean areas, *for the protection of life and property* and the enhancement of the national economy. NWS data and products form a national information database *and infrastructure which can be used by other government agencies, the private sector, the public* and the global community.**

National Emergency Warning System (NEWS)

- **NOAA NWS has the only existing, operational infrastructure capable of supporting an effective National Emergency Warning System (NEWS).**

- **NOAA Weather Radio (NWR) and Weather Wire Service (NWWS) are the critical parts of this infrastructure that provide effective, timely end point delivery of emergency warnings to the public and people with disabilities.**

NOAA NWS Warnings Systems

- **The NOAA NWS NWR and NWWS emergency warning systems are wireless, direct, and fast private networks.**

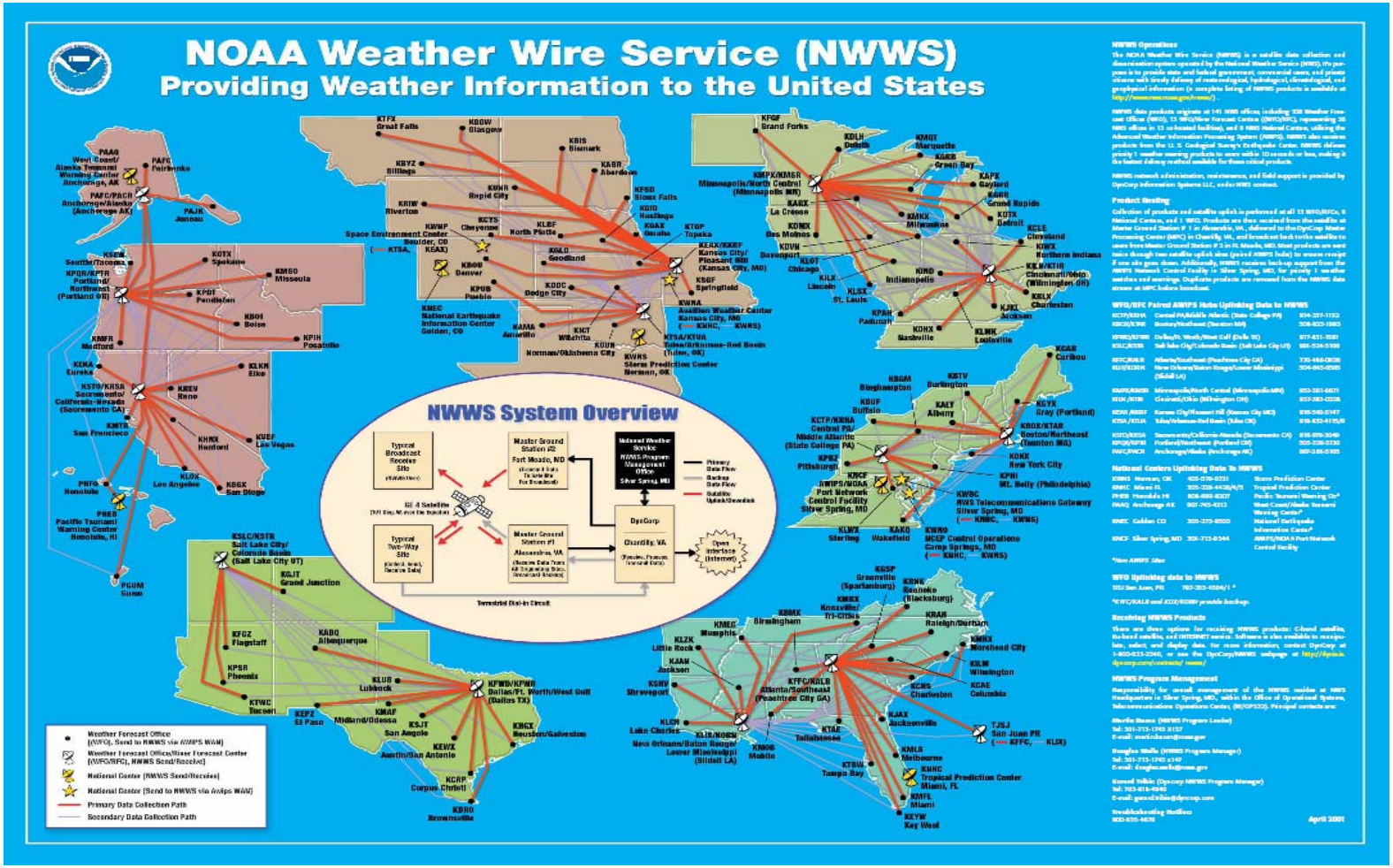
- **They reach more users directly, have higher availability, and have less delay than other systems.**

- **They are currently accessible for limited emergency warnings to people with disabilities.**

NOAA Weather Wire Service (NWWS)

- **Coverage: U.S., incl. AK, HI, & PR**
- **Delivery Delay: Seconds**
- **End User: Emergency Managers/Mass Media**
- **User Cost: $150 per month**
- **Product Type: Text and Graphics**
- **Delivery: C and Ku-band satellite**
  Email & Internet

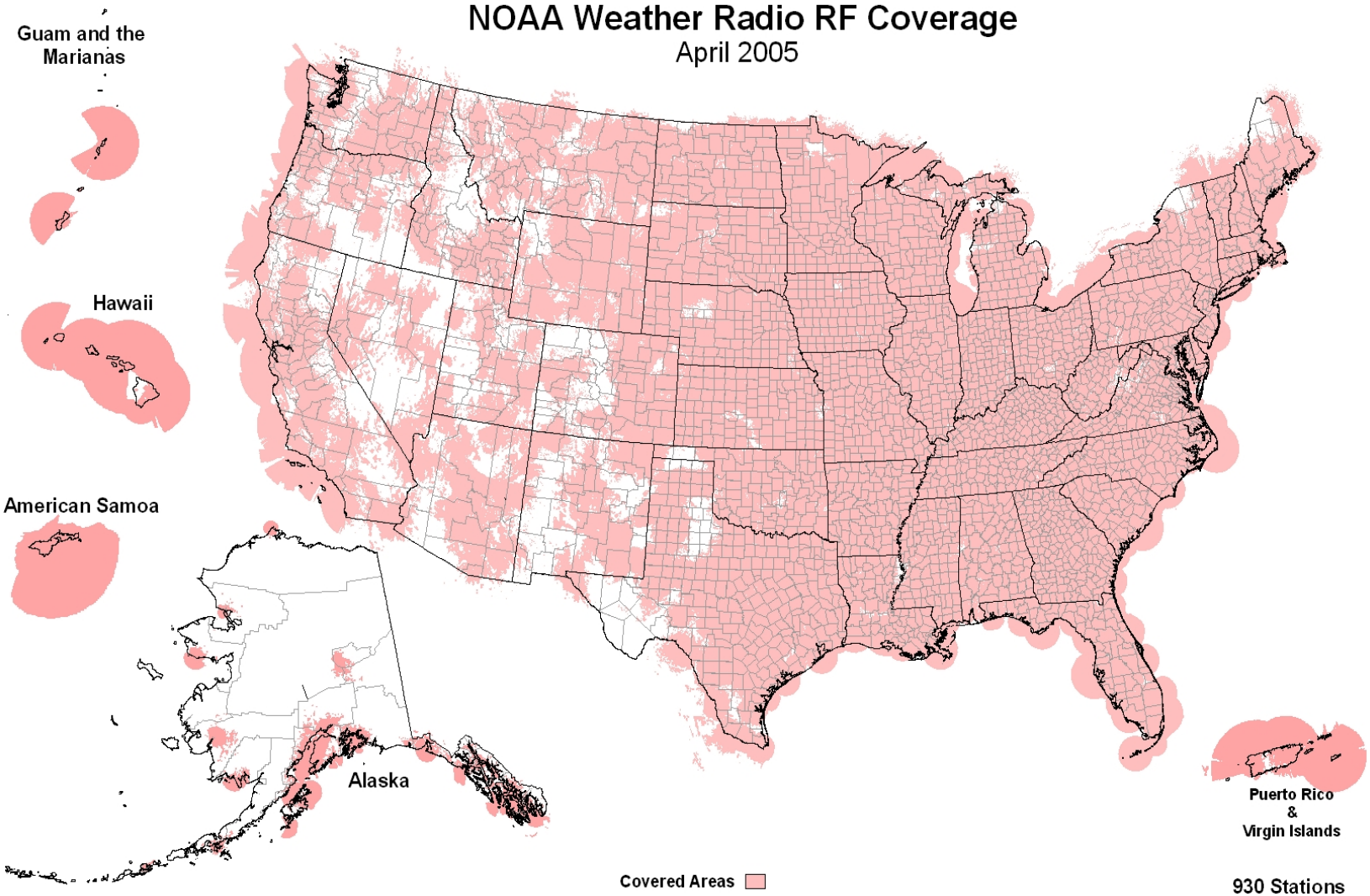
NOAA Weather Wire Service (NWWS)



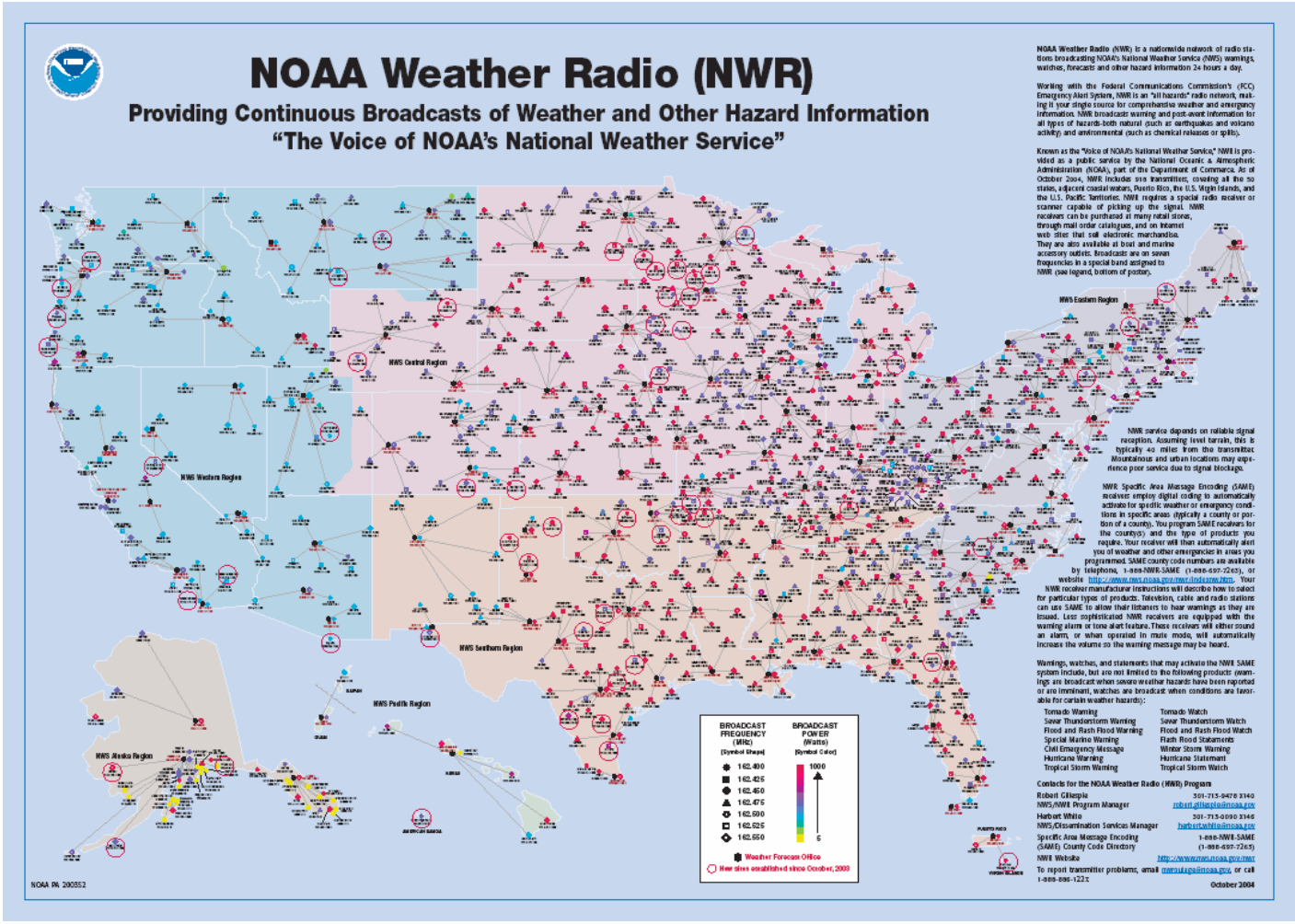
NOAA Weather Radio (NWR)

- **Coverage: 97+ % of U.S. population**
- **Delivery Delay: Seconds**
- **End User: Public/Emergency Managers**
- **User Cost: $40-200, one time**
- **Product Type: Audio with alarms**
- **Delivery: Audio Broadcast**

NWR Coverage



NOAA Weather Radio (NWR)



Major Issue: Focus on NWR

- **Problem: In the past everyone, including NOAA, NOAA NWS, DHS, FCC, and PPW, was too narrowly focused on NWR. In this context, NWR falls short of being able to meet anticipated needs and was not duly considered for NEWS.**

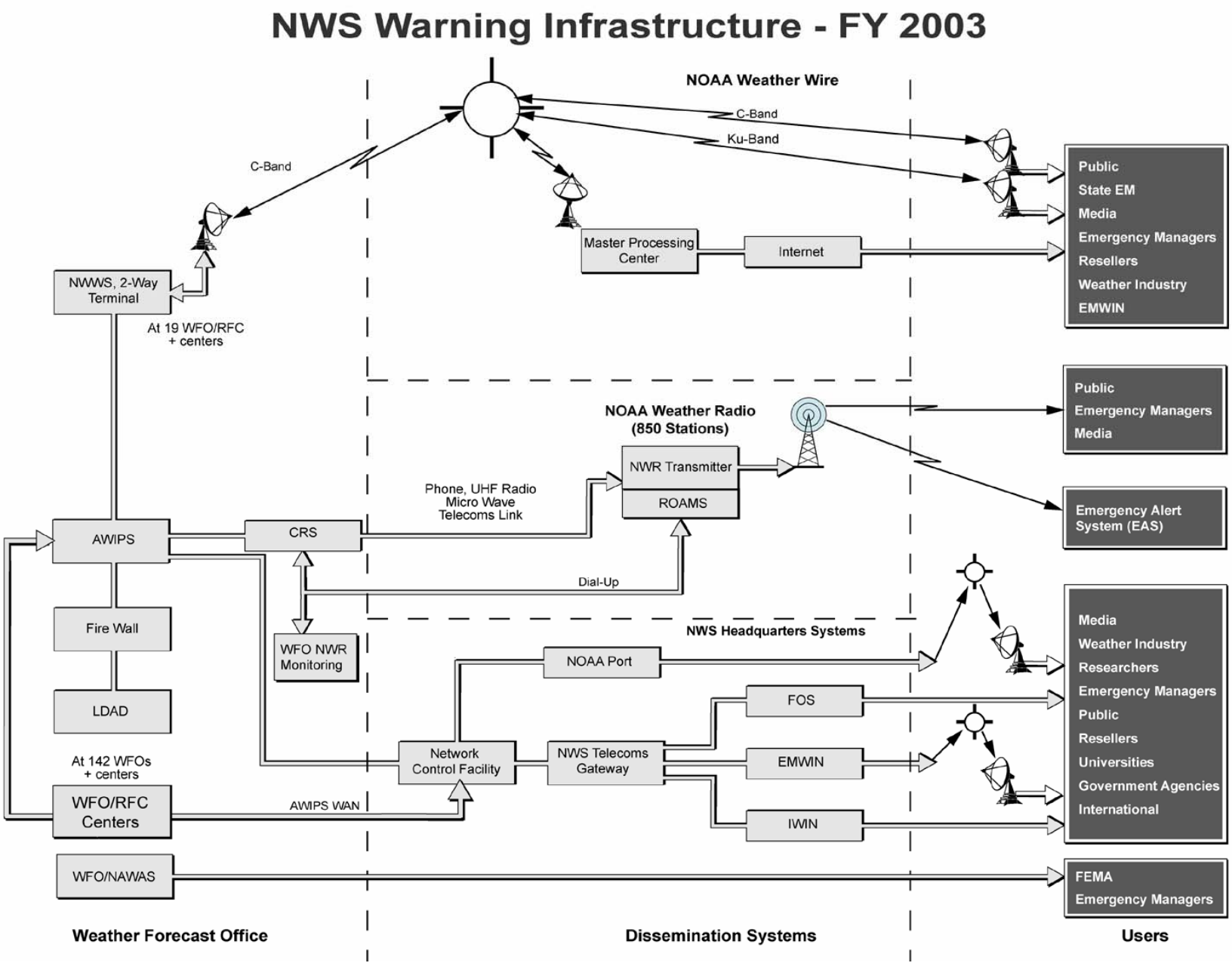
- **Solution: Expand vision to include the entire NOAA NWS infrastructure (telecommunications, people, facilities, and dissemination systems) and offer as the backbone for NEWS.**

- **Result: NOAA NWS infrastructure emerges as the only viable candidate platform for an NEWS.**

Issues With NOAA NWS Systems

- **System Integration - Limited**
- **Operational Cost – Significant**
- **Emergency Management Access - Limited**
- **Network Configuration Dynamics - Limited**
- **External End Point Connectivity - Limited**
- **Broadcast Performance/Quality - Limited**
- **NWR Coverage – Goal Not Met**
- **Public Awareness - Limited**

Current NWS Configuration

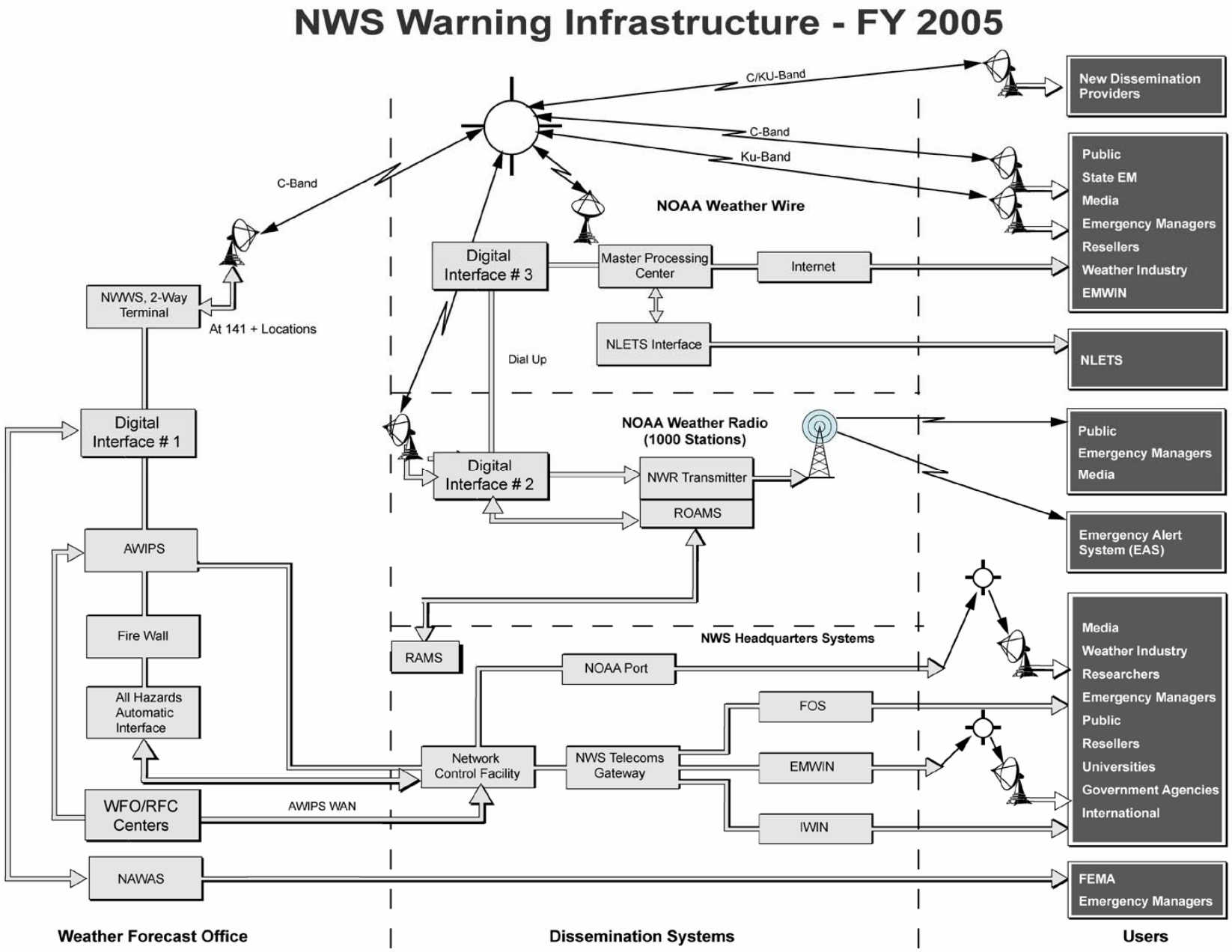


Proposed Transition to NEWS

- **Satellite links for major Warning Sources**
- **Satellite links to all NWR Stations**
- **Local access for Emergency Managers**
- **Digital message handling and processing**
- **Enhanced/upgraded existing systems**
- **Ubiquitous voice and text broadcasts**

- **Implementation cost around $70 million of which $10 million is required for text broadcasting**

NEWS Configuration



Goals

- **Everywhere All-The-Time NEWS with**
  - **Text and voice Warning delivery**
  - **Warning deliveries event and geo-specific**
  - **97+ % of population in every State covered**
  - **Delivery less than 30 seconds**
  - **Timely access for all warning providers**
  - **Timely delivery to all at risk**
  - **Configurable, dynamic, reliable network**
  - **Improved secondary delivery**
  - **Accessible to people with disabilities**

Potential Access Improvements

- **Full text emergency warnings via NWR**
- **Digitized audio on NWWS**
- **Enable 3rd party text and voice delivery via**
  - **Cell phone and pager voice and Email text**
  - **Internet and Internet radio**
  - **Satellite radio and television**
  - **Broadcast and Cable Text, SAP, Caption**
- **Drive printers, screens and tactile devices**

Status of Access Efforts

- **Weather Radio Improvement Program (WRIP) currently in progress – unfunded partial solution providing access improvements as optional**

- **Initiatives for NWR Upgrade proposed for NOAA NWS FY 2008-2011 Budget – does not address access issue**

- **Warning, Alert, Response, Network Act (WARN - S. 1753) introduced in Congress in September 2005 and reported out of committee in October– mentions "..public with disabilities …are able to receive alerts and information…"**

Conclusions

- **NOAA NWS has operational infrastructure that can be the backbone for an effective National Emergency Warning System.**

- **Infrastructure upgrades and system integration are needed to transition from limited analog to ubiquitous digital collection and delivery.**

- **Changes would revolutionize emergency warning delivery to public and people with disabilities while enhancing NOAA NWS operations with limited increases in operational costs.**

Recommendation

Advocates for access to emergency warnings for people with disabilities (NOD, NFB, TDI, NCAM, ICC, NCD, DHHCAN, SHHH, ALDA, etc.) should consolidate efforts and make Congress, NOAA, and DHS understand the need to fund and develop an accessible National Emergency Warning System built on existing NOAA NWS infrastructure.